GX/GP Firmware Upgrade Procedure

This document describes the procedure for upgrading the GX/GP firmware.
Please read this document before proceeding with the upgrade.

Applicable Products

GX10/GX20/GP10/GP20 (standard models only)
*Excludes special specifications (with suffixes of /S1–999 or /Z). Note that in-factory maintenance is required for those models.

Versions after Upgrade

GX/GP Main Unit	R2.02.08
Web Application	R2.02.01

Items to Prepare

- GX/GP main unit
- SD memory card
  Be sure to use the GX/GP main unit or SD card formatter software available from the SD Association to format the SD memory card. Other formats are not supported by the firmware upgrade.
- GX10/GX20/GP10/GP20 Paperless Recorder First Step Guide (IM 04L51B01-02EN)
- GX10/GX20/GP10/GP20 Paperless Recorder User's Manual (IM 04L51B01-01EN)
- GX10/GP10/GX20/GP20 Advanced Security Function (/AS) User's Manual (IM 04L51B01-05EN)

Notes

Note 1: A GX/GP that has been upgraded to R2.01.01 or later cannot be downgraded to R1.XX.XX (where XX is any number).
Note 2: This document is intended for the free GX/GP firmware upgrade.
Note 3: When upgrading the firmware, you must ensure that you also have the latest versions of all related software.
Note 4: If in-factory maintenance or repair is ever required, be sure to inform the factory that the unit has been upgraded.
Note 5: This upgrade resets the settings to their factory defaults. It is recommended to save your current settings to an SD card in order to easily restore them after the upgrade.
Note 6: Data recorded on the GX/GP main unit will be deleted after the upgrade. Please save your data to the SD memory card prior to downloading.

Upgrade Procedure

1 Checking the main unit version

Before starting the upgrade, check the main unit version number according to the following procedure.

1.1 On the main unit, press the MENU key (see Figure 1), then tap [Browse] > [System information] to display the System information screen (see Figure 2 and Figure 3).

1.2 Confirm the "Version information" and "Web application information" in the system information screen. "Web application information" is displayed if the "Version information" is R1.02.01 or later. If "Version information" is R1.01.01, "Web application information" is not displayed.
If the version matches the version after upgrade, you do not need to perform the upgrade.

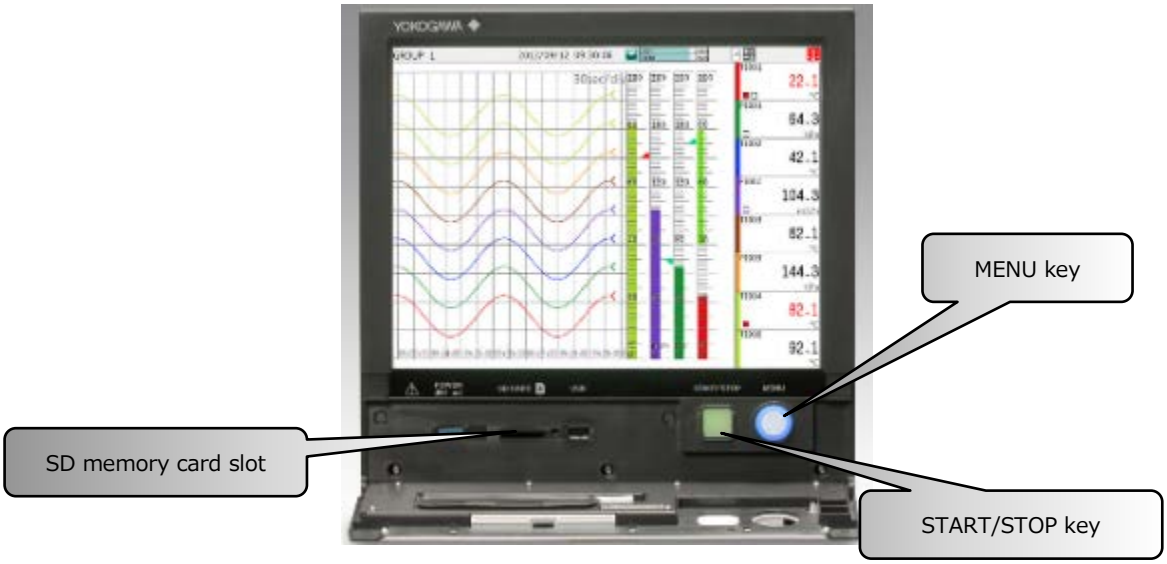

Figure 1: SD memory card slot and START/STOP key

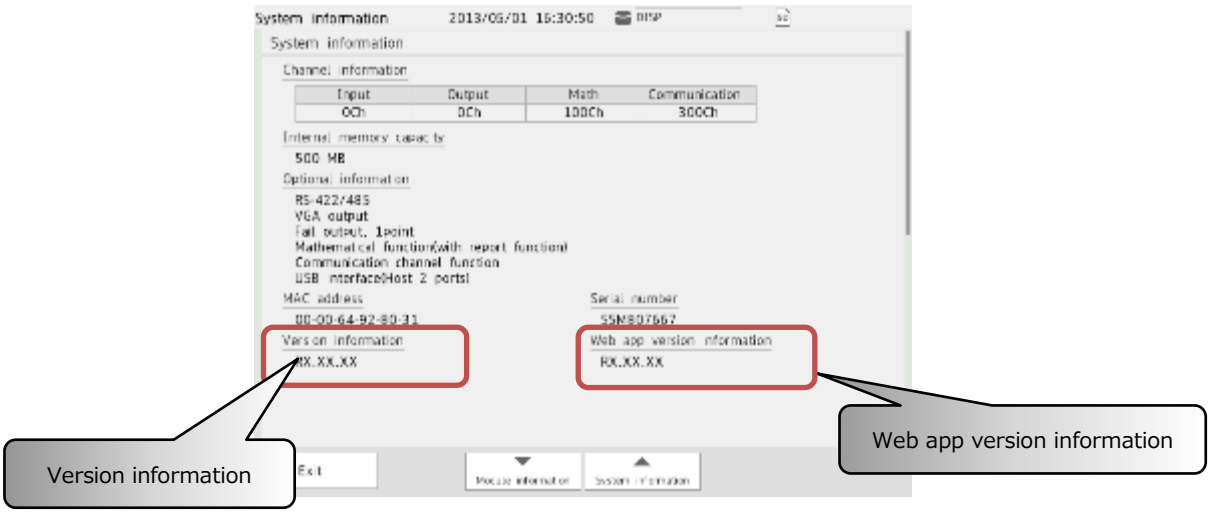

Figure 2: System information screen (version number is R1.XX.XX, where XX is any number)

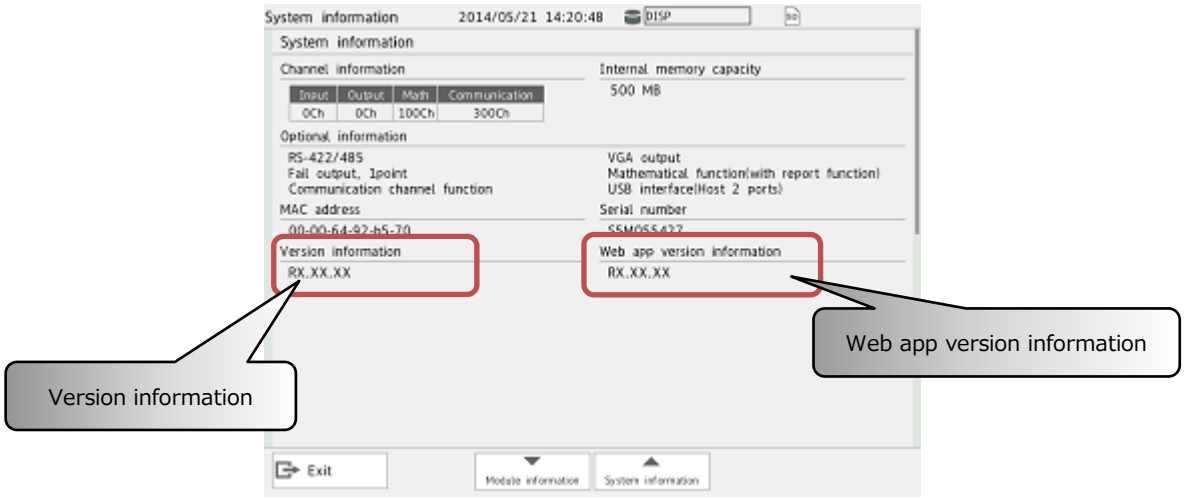

Figure 3: System information screen (version number is R2.XX.XX, where XX is any number)

2 Preparing the SD memory card for the upgrade

2.1 Download the upgrade file from our Web site and save it on the PC.
2.2 Double-click the file and unzip it to a folder of your choice.
2.3 Copy the unzipped file (see table 1) to the root directory of the SD memory card. Confirm that no other files having the same extension are saved on the SD memory card.
2.4 Check whether the file and folder names in Table 1 are present.

Table 1: Firmware used for upgrades

Files/Folder	Name
File	ndx100_main.rom
File	ndx100_boot.rom
File	ndx100_logo.rom
File	ndx200_main.rom
File	ndx200_2_main.rom
File	ndx200_boot.rom
File	ndx200_logo.rom
Folder	SYSTEM

3 Saving data recorded on the main unit

3.1 Insert the SD memory card prepared in step 2 into the SD memory card slot (see Figure 1).
3.2 Check that recording is stopped (the START/STOP key is unlit).
If recording is in progress, press the START/STOP key to stop recording.
3.3 On the main unit, press the MENU key, then tap [Browse] > [Memory summary Data save].
3.4 On the main unit, press the MENU key, then tap [Context] > [All save].
3.5 In the dialog box that is displayed, select "Save to" under SD and tap [OK].

4 Saving main unit settings

4.1 On the main unit, press the MENU key, then tap [Browse] > [Save load] > [Save settings] > [All above].
4.2 Tap [Media type] > [SD].
4.3 Tap [Folder name], then enter a folder name.
4.4 Tap [Execute].

For details on saving settings, see GX10/GX20/GP10/GP20 Paperless Recorder First Step Guide (IM 04L51B01-02EN), ”Saving and Loading Setting Parameters,” or see GX10/GX20/GP10/GP20 Paperless Recorder User’s Manual (IM 04L51B01-01EN), ”1.21 Saving Setting Parameters."

5 Upgrading the main unit

5.1 Check that recording is stopped (the START/STOP key is unlit).

5.2 Turn OFF the power.

5.3 Insert the SD memory card prepared in step 2 into the SD memory card slot (see Figure 1).
Do **not** remove the SD memory card until the upgrade is complete.

5.4 Hold down the START/STOP key while turning ON the power.
If the MENU key blinks purple and the start screen below appears (see Figure 4), please release the START/STOP key.

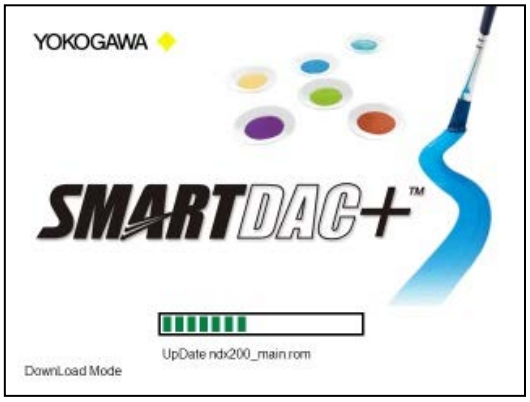

Figure 4: Splash screen (Download Mode)

5.5 If the main unit MENU key changes from blinking purple to continuously purple and the splash screen appears displaying the [Version Info] (see Figure 5), turn OFF the power.

Figure 5: Splash screen (Version Info)

5.6 With the SD memory card still inserted, turn ON the power.
The splash screen below (see Figure 6) appears, and the upgrade begins. The upgrade can take several minutes. Do **not** turn OFF the unit while the upgrade is in progress. When the screen in Figure 7 appears, the upgrade is complete.

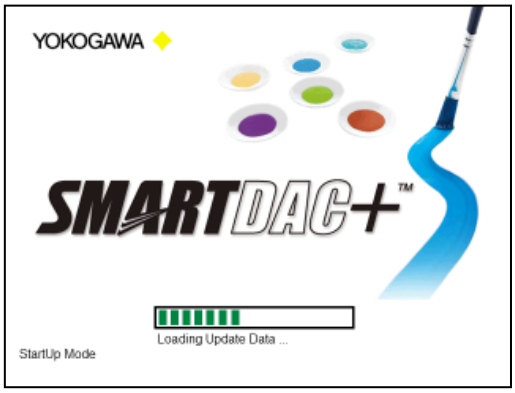

Figure 6: Screen when upgrade is in progress

Figure 7: Screen when upgrade is complete

5.7 If the message, "Error: Invalid Update Data" appears as in Figure 8, the data in the SD memory card is damaged. Following step 2, save the SD memory card upgrade data once again to the SD memory card, and then repeat step 5. During this process, be sure not to delete the recording and settings data saved in steps 3 and 4.

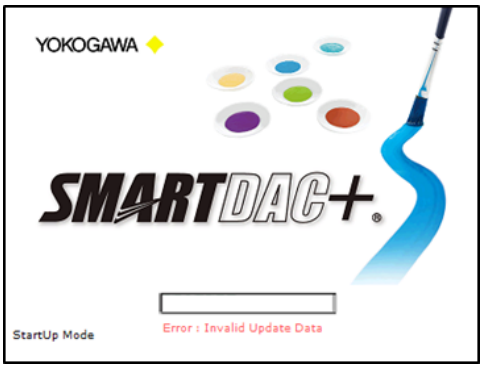

Figure 8: Screen when upgrade fails

6 Checking the version

Check whether the upgrade was successful.

6.1 On the main unit, press the MENU key, then tap [Browse] > [System information] to display the System information screen.

6.2 In the System information screen, confirm that the latest versions are displayed under "Version information" and "Web app version information".

6.3 If the latest versions are not shown, return to step 5 and repeat the upgrade.

7 Main unit reconfiguration and initialization

7.1 Check that recording is stopped.

7.2 On the main unit, press the MENU key, then tap [Browse] > [Initialize Calibration] > [Reconfiguration] > [Execute] to display the System information screen (see figure 9).

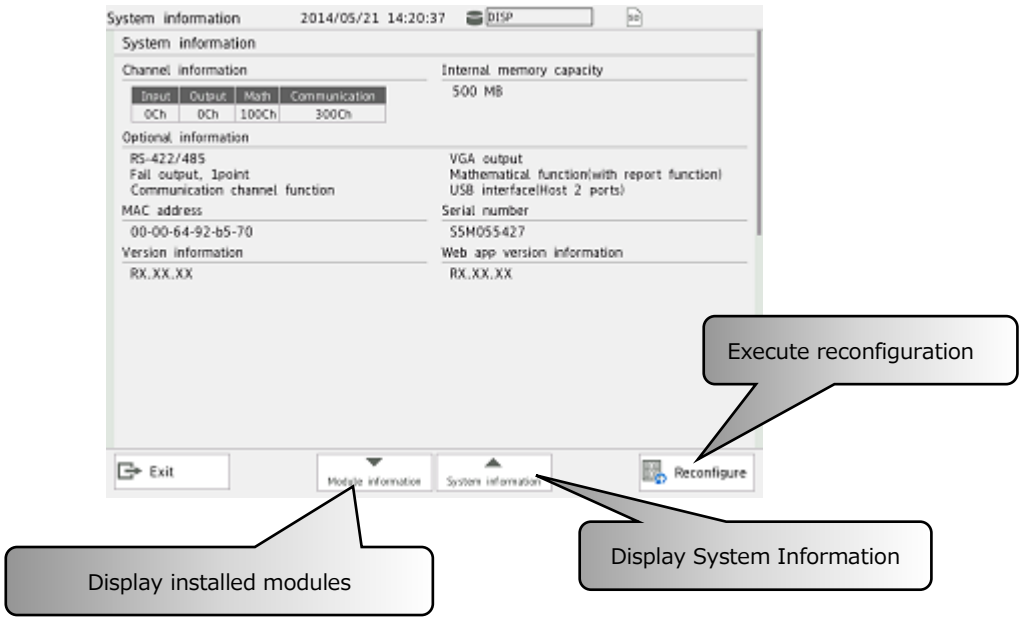

Figure 9: System information screen

7.3 On the System information screen, tap [Reconfigure]. In the confirmation screen, tap [OK] to execute the reconfiguration.
The message, "M853 System reconfiguration in progress" appears.

7.4 On the System information screen, tap [Module information], then confirm that the installed module appears under [Recognized module].

7.5 On the main unit, press the MENU key, then tap [Browse] > [Initialize Calibration] > [Initialize] > [Initialize all] > [ON] > [Execute]. In the confirmation screen, tap [OK] to initialize the main unit settings.

If the Advanced Security function (/AS) is enabled, an error message is displayed if no read-writable SD memory card is inserted. Insert a read-writable SD card before executing. For details, see GX10/GP10/GX20/GP20 Advanced Security Function (/AS) User's Manual (IM 04L51B01-05EN).

For details on reconfiguration and initialization, see GX10/GX20/GP10/GP20 Paperless Recorder First Step Guide (IM 04L51B01-02EN), "Reconfiguring the GX/GP (Module identification)," or GX10/GX20/GP10/GP20 Paperless Recorder User's Manual (IM 04L51B01-01EN), "1.24 Initializing and Calibrating the System (Initialization, reconfiguration, touch screen calibration)."

8 *Loading main unit settings*

Load the settings saved in step 4.

8.1 On the main unit, press the MENU key, then tap [Browse] > [Save load] > [Load settings] > [All above].
8.2 Tap [Media type] > [SD].
8.3 Tap [Select folder], select the folder specified in step 4.3, then tap [OK].
8.4 Tap [Execute] to start loading settings.

Some settings may not be able to be loaded. Check the settings after loading, and re-enter settings if necessary before use.

If the Advanced Security function (/AS) is enabled, an error message is displayed if no read-writable SD memory card is inserted. Insert a read-writable SD card before executing. For details, see GX10/GP10/GX20/GP20 Advanced Security Function (/AS) User's Manual (IM 04L51B01-05EN).

For details on saving settings, see GX10/GX20/GP10/GP20 Paperless Recorder First Step Guide (IM 04L51B01-02EN), "Saving and Loading Setting Parameters," or see GX10/GX20/GP10/GP20 Paperless Recorder User's Manual (IM 04L51B01-01EN), "1.21 Saving Setting Parameters."

9 Deleting temporary Internet files

After performing the upgrade, if you used the Web application, you must clear the Web browser and Java Runtime caches per the procedures below. If the caches are not cleared before proceeding, the Web browser's pre- and post-upgrade statuses will be out of synch, resulting in a possible malfunction.

Note that when the caches are cleared, it may take a few seconds to load pages when you visit them for the first time, but on and after the second time they will be displayed as quickly as before.

9.1 Clearing the Web browser's cache (temporary internet files)

Inquire with Microsoft for details.

1. Example with Internet Explorer 8 and 9

① Click **Tools** > **Internet Options** to open the Internet Options properties.
② On the **General** tab, under **Browsing History**, click the **Delete** button. The Delete Browsing History dialog box appears.
③ Under **Temporary Internet Files**, select the **Cookies** check box. If the URL of the GX/GP you use has been added to favorites, clear the **Preserve favorites website data** check box and click **Delete**. On the **General** tab, under **Browsing History**, click the **Delete** button. The Delete Browsing History dialog box appears.

2. Example with Internet Explorer 10 and 11

① Click the **Tools** button and select **Internet options** to open the Internet Options properties.
② On the **General** tab, under **Browsing history**, click the **Delete** button. The Delete Browsing History dialog box appears.
③ Select the **Temporary internet files** and **Cookies and website data** check boxes. If the URL of the GX/GP you use has been added to favorites, clear the **Preserve Favorites website data** check box and click **Delete**.

9.2 Clearing the Java Runtime cache

Inquire with Oracle for details.

An example using Java Runtime 1.7.0_xx（Version 7 Update xx） where "xx" is 51 or later.

① On the *Start* menu click *Control Panel* to open the Windows control panel.
② Double-click *Java* to open the Java control panel.
③ On the *General* tab, under *Temporary Internet Files*, click the **Settings** button to open the Temporary Files dialog box.
④ Click the **Delete Files** button. In the confirmation dialog box, select the *Cached Applications* and applets and *Traces and log files* check boxes and click the **OK** button.

10 Upgrading the software

If upgrading to the latest main unit firmware, please also use the latest version of the related software below. Visit the download page on our Web site for the latest releases of each program.

Related Software

- SMARTDAC+ STANDARD Universal viewer
- SMARTDAC+ STANDARD hardware configurator
- SMARTDAC+ Report template builder
- SMARTDAC+ Excel Report Simulator

Download Site

- http://www.smartdacplus.com/software/en/

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